

WHAT IS CLAIMED IS:

1. A navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, comprising:
a controller that:
searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;
detects whether the first route includes a curve;
changes the search cost for any detected curve;
searches for a second route to the destination based on the search cost that has been changed; and
employs the second route as the route to be recommended instead of the first route.
2. The navigation system according to claim 1, wherein the controller determines a radius of curvature based on node coordinates of a road and detects the curve based on the radius of curvature.
3. The navigation system according to claim 1, wherein the controller detects the curve based on the number of nodes in a road.
4. A navigation system according to claim 1, wherein the map data includes road data including information indicating whether a road includes the curve, and the controller detects the information indicating whether the road includes a curve.
5. The navigation system according to claim 1, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the controller selects the second route as the recommended route.
6. The navigation system according to claim 2, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the controller selects the second route as the recommended route.
7. The navigation system according to claim 3, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the controller selects the second route as the recommended route.
8. The navigation system according to claim 4, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the controller selects the second route as the recommended route.

9. The navigation system according to claim 5, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the controller selects the second route as the recommended route.

10. The navigation system according to claim 1, wherein the controller detects the curve based on a number of nodes per unit length.

11. A navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, comprising:

a controller that:

searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;

detects a road having a greater change in altitude than a predetermined value from the first route;

changes the search cost for any detected road;

searches for a second route to the destination based on the search cost that has been changed; and

employs the second route as the route to be recommended instead of the first route.

12. A program for use in a navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, the program comprising:

a routine that searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;

a routine that detects whether the first route includes a curve;

a routine that changes the search cost for any detected curve;

a routine that searches for a second route to the destination based on the search cost that has been changed; and

a routine that employs the second route as the route to be recommended instead of the first route.

13. The program of claim 12, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the second route is selected as the recommended route.

14. The program of claim 12, wherein the curve is detected based on a number of nodes per unit length.

15. A program for use in a navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, the program comprising:

- a routine that searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;
- a routine that detects a road having a greater change in altitude than a predetermined value from the first route;
- a routine that changes the search cost for any detected road;
- a routine that searches for a second route to the destination based on the search cost that has been changed; and
- a routine that employs the second route as the route to be recommended instead of the first route.

16. A storage medium for use in a navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, wherein the storage medium stores:

- map data used in searching for the route and providing the navigation guidance along the route; and
- a program for use in the navigation system, comprising:
 - a routine that searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;
 - a routine that detects whether the first route includes a curve;
 - a routine that changes the search cost for any detected curve;
 - a routine that searches for a second route to the destination based on the search cost that has been changed; and
 - a routine that employs the second route as the route to be recommended instead of the first route.

17. The storage medium of claim 16, wherein when a length of the second route is smaller than a length of the first route by a predetermined value, the second route is selected as the recommended route.

18. The storage medium of claim 16, wherein the curve is detected based on a number of nodes per unit length.

19. A storage medium for use in a navigation system that searches for a route to a destination based on stored map data that provides navigation guidance to the destination along the route, wherein the storage medium stores:

map data used in searching for the route and providing the navigation guidance along the route; and

a program for use in the navigation system, comprising:

a routine that searches for a first route to the destination as a route to be recommended based on a calculation of a search cost;

a routine that detects a road having a greater change in altitude than a predetermined value from the first route;

a routine that changes the search cost for any detected road;

a routine that searches for a second route to the destination based on the search cost that has been changed; and

a routine that employs the second route as the route to be recommended instead of the first route.